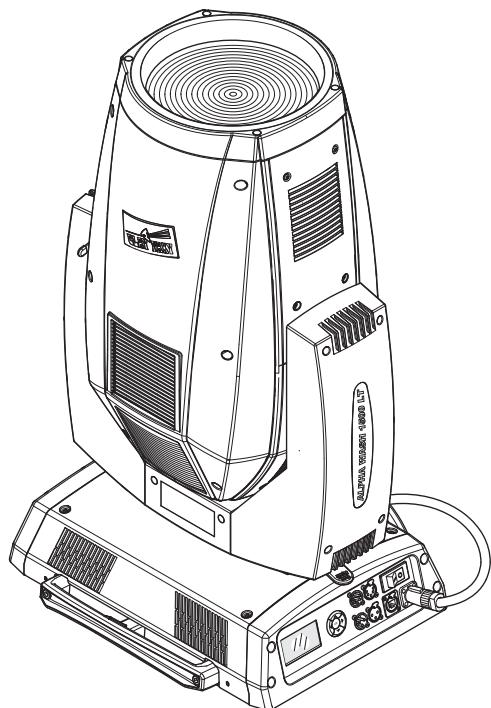


## INSTRUCTION MANUAL

**PRELIMINARY**



### INDEX

Page	Contents
2	Safety information
3	Unpacking and preparation
4	Installation and start-up
5	Control panel
8	Menu setting
15	Channel functions
20	Technical information
21	Cause and solution of problems

*Congratulations on choosing a Clay Paky product!*

*We thank you for your custom.*

*Please note that this product, as all the others in the rich Clay Paky range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.*

Carefully read this instruction manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

CLAY PAKY S.p.A. disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this instruction manual, which must always accompany the fitting.

CLAY PAKY S.p.A. reserves the right to modify the characteristics stated in this instruction manual at any time and without prior notice.

## SAFETY INFORMATION

### • Installation

Make sure all parts for fixing the projector are in a good state of repair.

Make sure the point of anchorage is stable before positioning the projector.

The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.

If the safety chain gets used, it needs to be replaced with a genuine spare.

1500W  5...m 

### • Minimum distance of illuminated objects

The projector needs to be positioned so that the objects hit by the beam of light are at least 5 metres (16' 5") from the lens of the projector.



$t_a$  40°C

### • Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.20 metres (8") from every point on the surface of the fitting.

IP20

### • Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.



### • Maximum ambient temperature

Do not operate the fixture if the ambient temperature ( $T_a$ ) exceed 40° C (104° F).

$t_c$  150°C

### • IP20 protection rating

The fitting is protected against penetration by solid bodies of over 12mm (0.47") in diameter (first digit 2), but not against dripping water, rain, splashes or jets of water (second digit 0).

### • Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (**Class I** appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

### • Hooking up to the supply mains

Connection to the electricity mains must be carried out by a qualified electrical installer.

Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

### • Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 150°C (302°F).

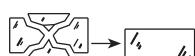
### • Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.

After switching off, do not remove any parts of the fitting for at least 10 minutes. After this time the likelihood of the lamp exploding is virtually nil. If it is necessary to replace the lamp, wait for another 20 minutes to avoid getting burnt.

The fitting is designed to hold in any splinters produced by a lamp exploding. The lenses must be mounted and, if visibly damaged, they have to be replaced with genuine spares.







### • Lamp

The fitting mounts a high-pressure lamp that needs an external igniter. This igniter is fitted onto the apparatus.

- Carefully read the "operating instructions" provided by the lamp manufacturer.
- Immediately replace the lamp if damaged or deformed by heat.



The products referred to in this manual conform to the European Community Directives to which they are subject:

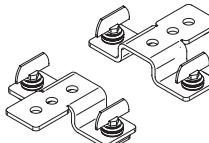
- Low Voltage 2006/95/CE
- Electromagnetic Compatibility 2004/108/CE

## UNPACKING AND PREPARATION

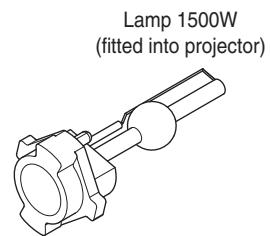
1



099398

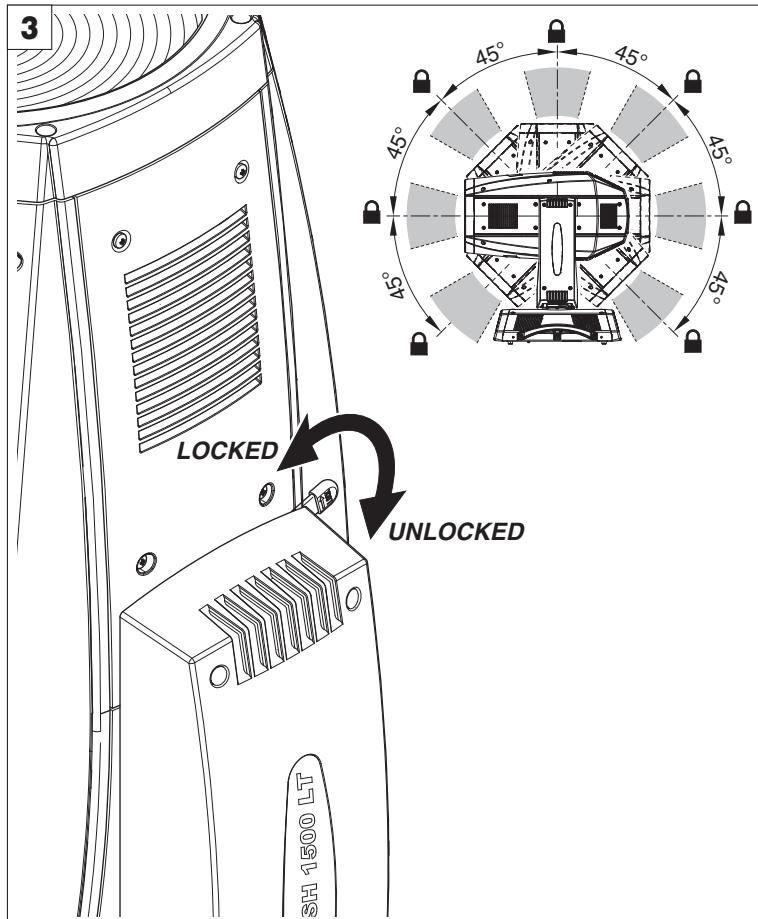
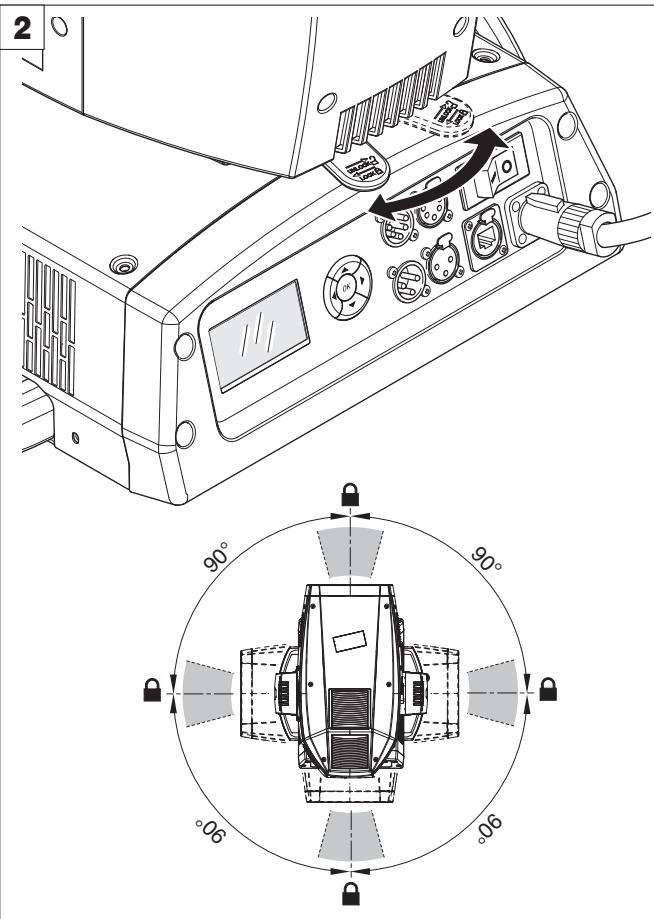


2 x 183102/802



Lamp 1500W  
(fitted into projector)

Packing contents - Fig. 1

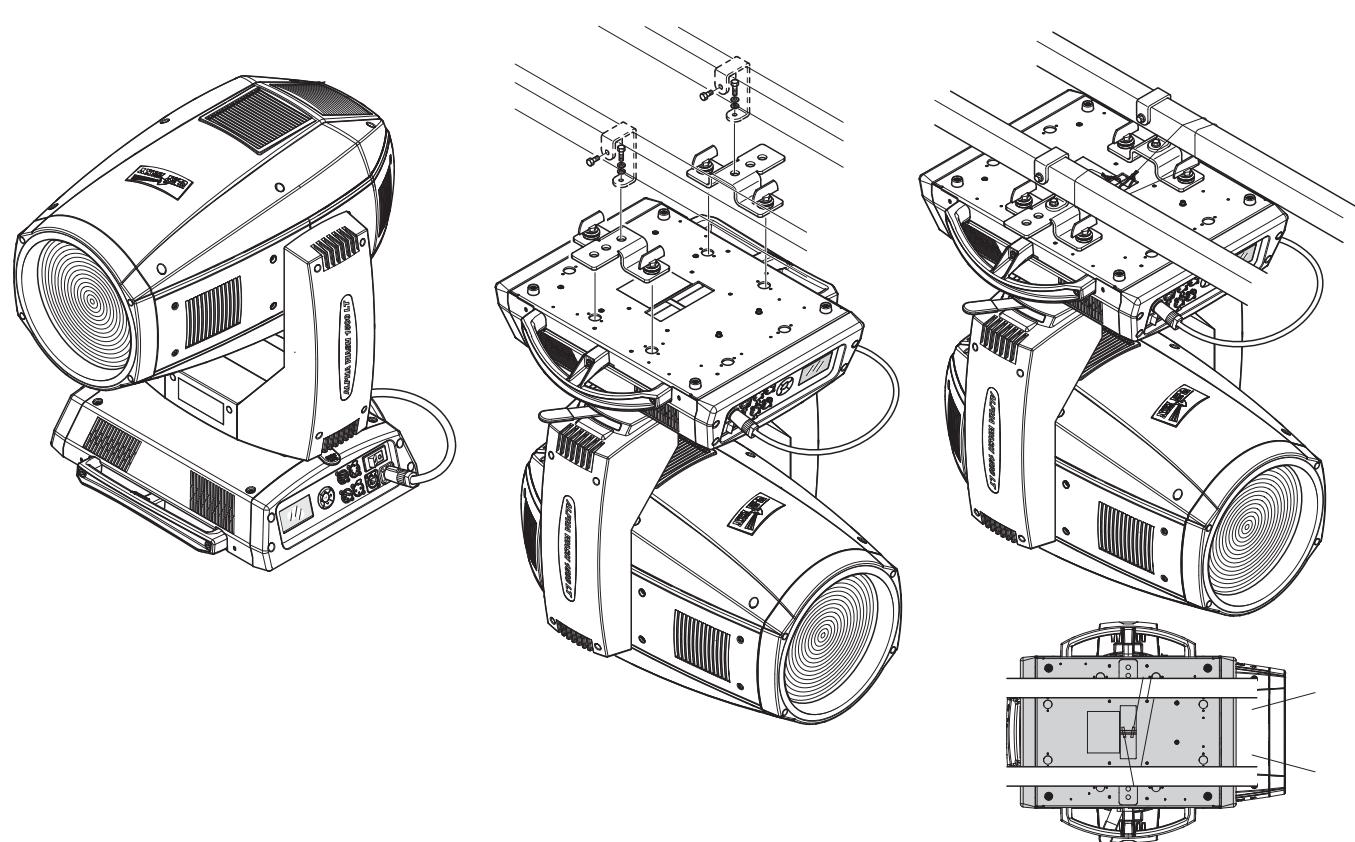


PAN Mechanism Lock and Release (every 90°) - Fig. 2

TILT Mechanism Lock and Release (every 45°) - Fig. 3

## INSTALLATION AND START-UP

4

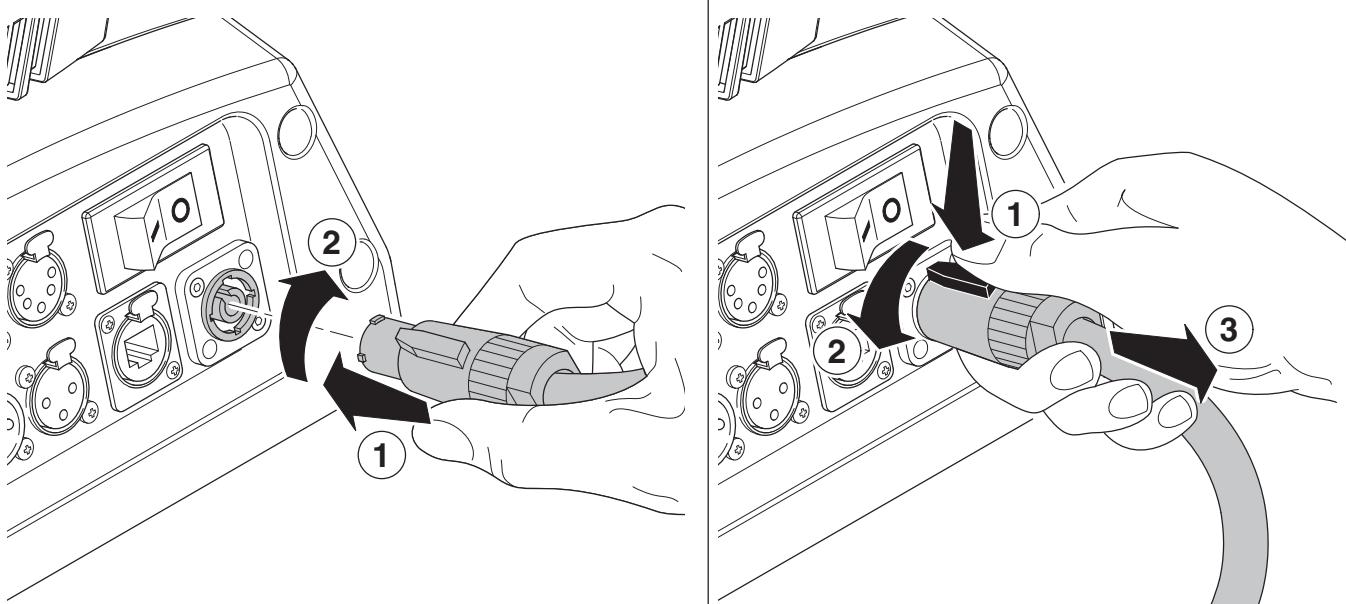


Installing the projector - Fig. 4

The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.

**WARNING:** *with the exception of when the projector is positioned on the floor, the safety cable must be fitted. (Cod. 105041/003 available on request). This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.*

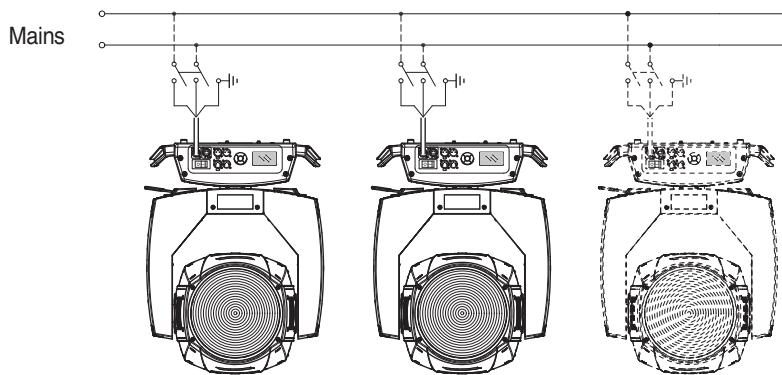
5



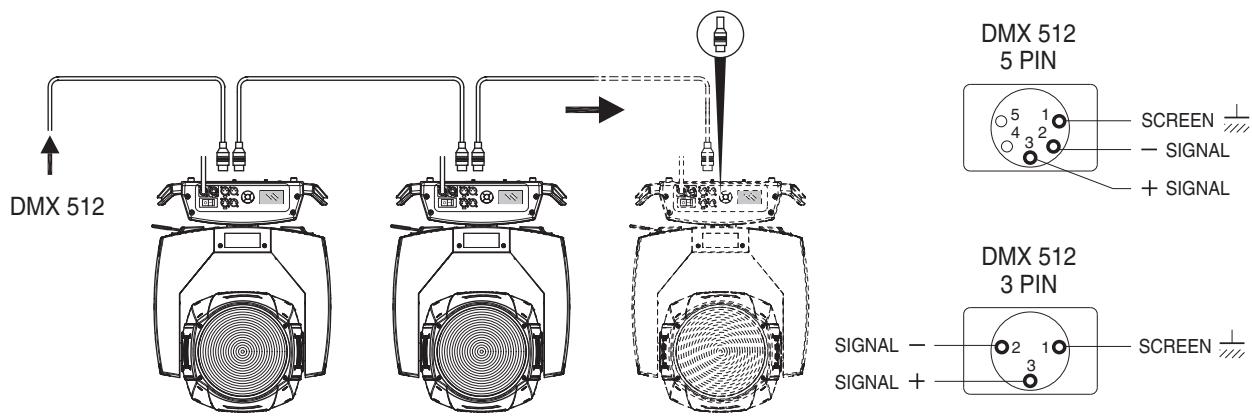
Connecting and disconnecting power cable - Fig. 5

## CONTROL PANEL

6



7



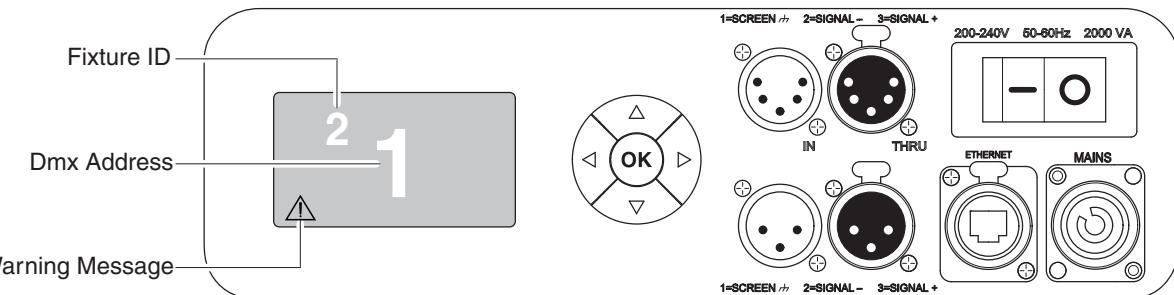
Connecting to the mains supply - Fig. 6

Connecting to the control signal line (DMX) - Fig. 7

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 120 characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 120Ω (minimum 1/4 W) between terminals 2 and 3.

**IMPORTANT:** The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

8



Switching on the projector - Fig. 8

Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display:



Model  
Alpha WASH  
1500 LT

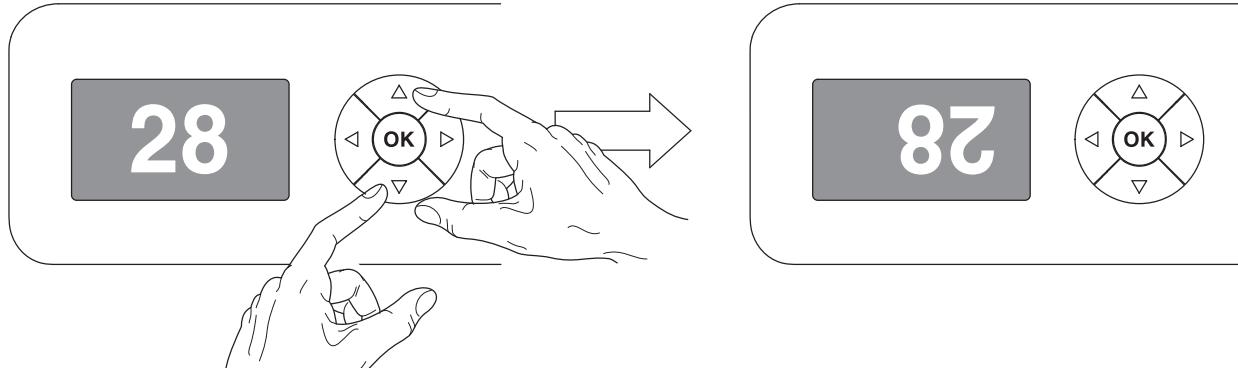
Firmware  
Version X.X.X  
Date - Hour

xxx (Fixture ID)  
Dmx Address xxx

System errors  
E: .....  
W: .....

On conclusion of resetting in the case of the absence of the dmx signal, Pan and Tilt move to the "Home" position (Pan 50% - Tilt 50%). The control panel (Fig. 8) has a display and buttons for the complete programming and management of the projector menu. The display can be in one of two conditions: rest status and setting status. When it is in the rest status, the display shows the projector's DMX address and the Fixture ID address (if setted).

During menu setting status, after a wait time (about 1 minute) without any key having been pressed, the display automatically returns to rest status. It should be noted that when this condition occurs, any possible value that has been modified but not yet confirmed with the **OK** key will be cancelled.



#### Reversal of the display - Fig. 9

To activate this function, press UP and DOWN buttons simultaneously while the display is in the rest mode. This status will be memorised and maintained even for the next time it will be switched on. To return to the initial state, repeat the operation all over again.

#### Setting the projector starting address

On each projector, the starting address must be set for the control signal (addresses from 1 to 512).

The address can also be set with the projector switched off.

Setting the address: see pag. 10.

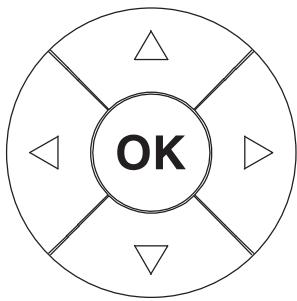
#### Setting the projector Fixture ID

On each projector, the Fixture ID address must be set for an easy identification of the fixtures in an installation (ID from 1 to 255).

The Fixture ID address can be set with the projector switched off.

Setting the Fixture ID: see pag. 10

## Functions of the buttons - Using the menu



Confirms the displayed value, or activates the displayed function, or enters the successive menu.



Decreases the value displayed (with auto-repetitions) or passes to the next item in the menu.



Increases the value displayed (with auto-repetitions) or passes to the next item in a menu.



Return to the top level



Commute from units, tens, hundreds, in the "Address", "Fixture ID" and "Calibration" menu.

### USING THE MENU:

- 1) Press **OK** once – "Main Menu" appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select the menu to be used:
  - Setup (Setup Menu): To set the setting options.
  - Option (Option Menu): To set the operating options
  - Informations (Informations Menu): To read the counters, software version and other information.
  - Manual Control (Manual control Menu): To trigger the test and manual control functions.
  - Test (Test Menu): To check the proper functioning of effects
  - Advanced (Advanced Menu): Access to the "Advanced menu" is recommended for a trained technical personnel.
- To enable the "Advanced" see pag.15

3) Press **OK** to display the first item in the selected menu.

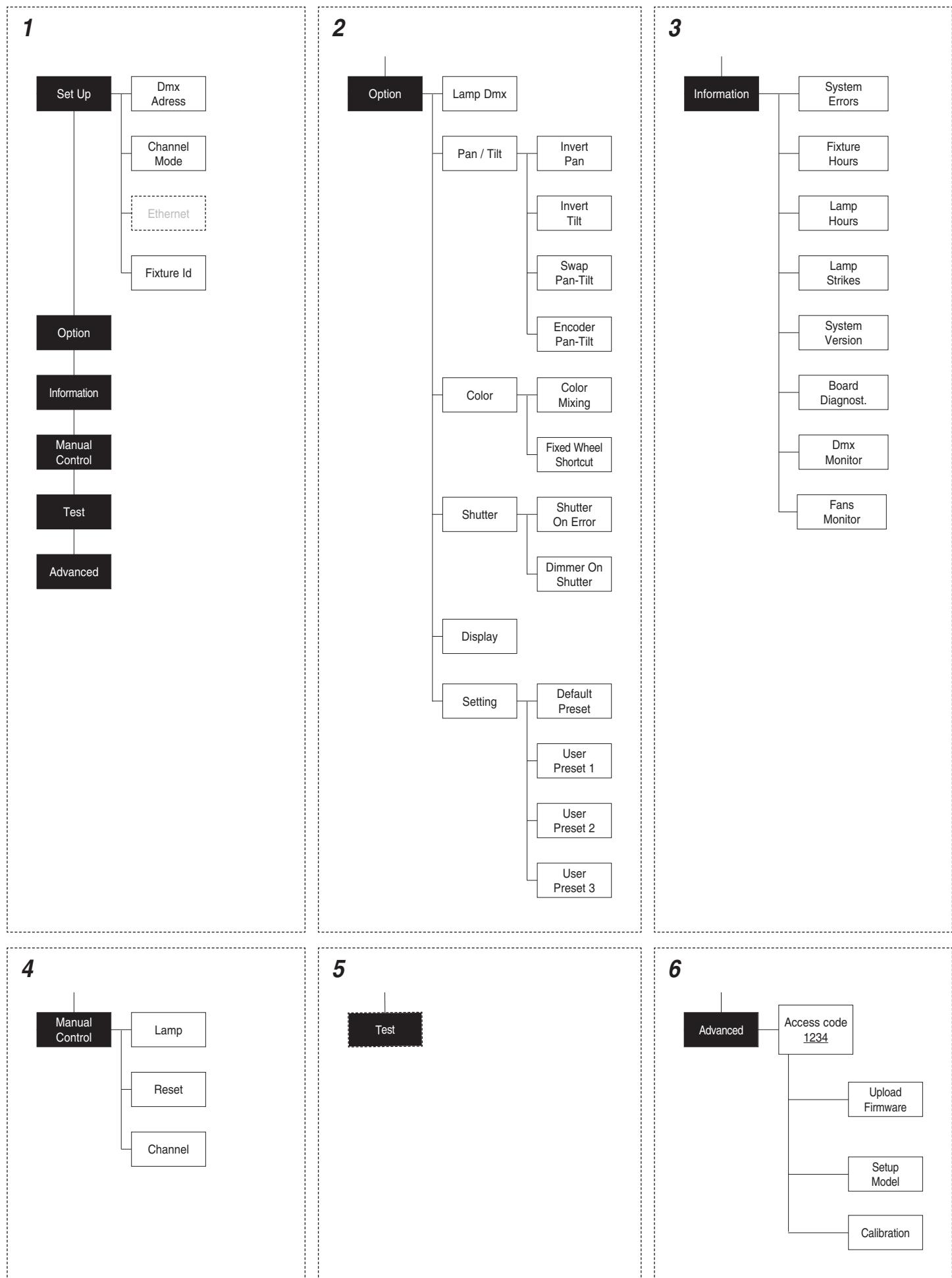
4) Use the UP **▲** and DOWN **▼** keys to select the MENU items.

### Setting addresses and options with the projector disconnected

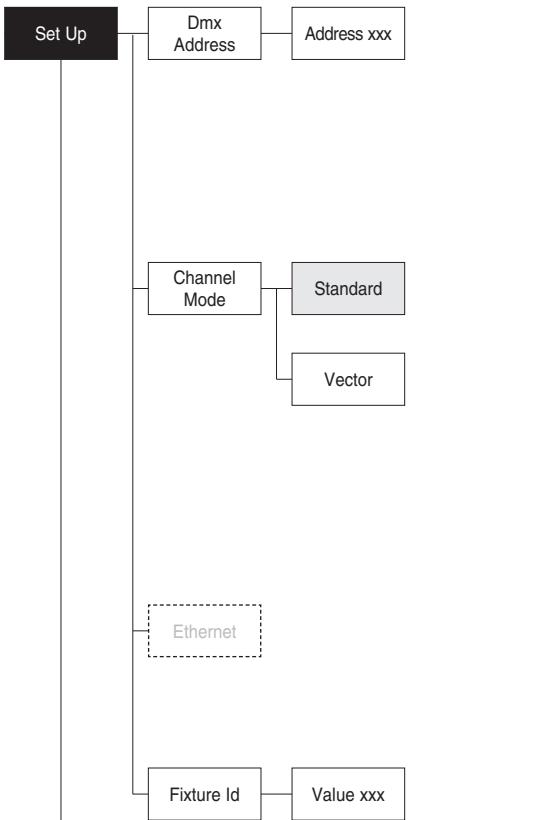
The projector's DMX address, as well as other possible operating options, can also be set when the appliance is disconnected from the electricity supply. All that is needed is to press **OK** to momentarily activate the display and thus access the settings. Once the required operations have been carried out, the display will switch off again after a wait time of 15 seconds.

# MENU SETTING

## MAIN MENU



## SET UP MENU



### DMX ADDRESS

NOTE: Without the DMX signal the Address (XXX) flashing  
Allows you to select the DMX ADDRESS

- 1) Press **OK** - the current DMX Address appear on the display.
- 2) Use the UP **▲** and DOWN **▼**, RIGHT **▶** keys to plan the DMX Address.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### CHANNEL MODE

Allows you to select a channel arrangement from the two available.

- 1) Press **OK** - the current settings appear on the display (Standard or Vector).
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - Standard
  - Vector
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### ETHERNET

Work in progress

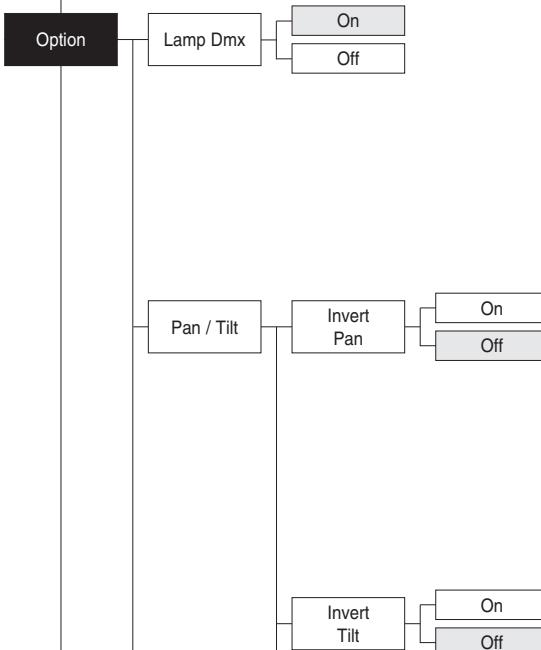
### Fixture ID

Allows you to select the FIXTURE ID

- 1) Press **OK** - the current Fixture ID appear on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to plan the Fixture ID.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## OPTIONS MENU

NOTE: On grey the default options



### PAN / TILT

#### Invert pan

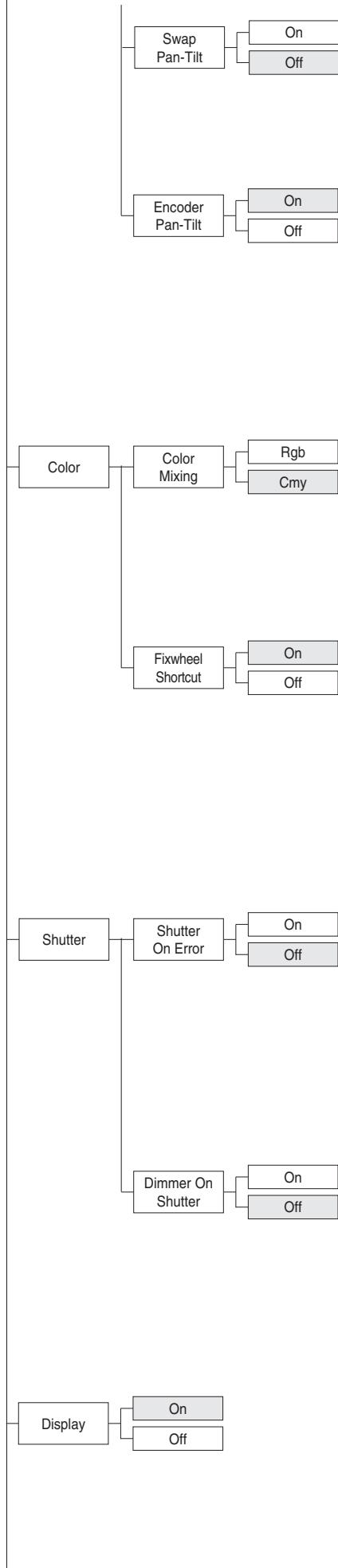
Used for reversing Pan movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the lamp remote control channel.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Invert tilt

Used for reversing tilt movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Tilt inversion.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.



## Swap Pan-Tilt

Used for swapping Pan and Tilt channels (as well as Pan fine and Tilt fine).

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan and Tilt channel swap.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## Encoder Pan-Tilt

Used for enabling the Pan / Tilt encoders.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan / Tilt encoders (every time the projector is turned on this option is set to On).
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## COLOR

### Color mixing

Used for reversing the CMY color mixing system.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:  
RGB color mixing mode  
CMY color mixing mode
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## Fixed wheel short-cut

Used for optimizing color change time so that the disc turns in the direction that requires shorter movement.

- 1) Press **OK** – the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) color change optimization.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

## SHUTTER

### Shutter on error

Used for automatically closing the stop/strobe in the event of Pan/Tilt position error.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) automatic stop/strobe closing in the event of Pan/Tilt position error.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

## Dimmer on Shutter

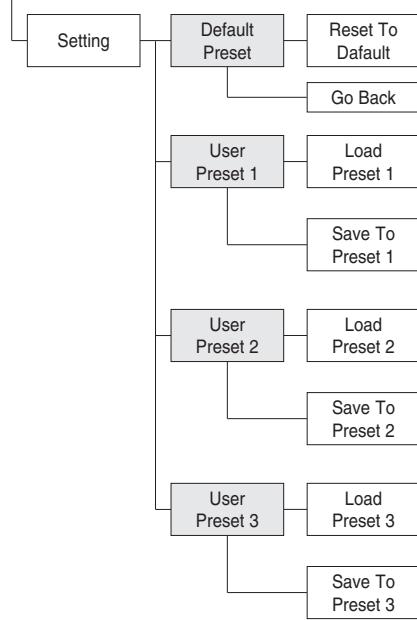
Enables automatic closing of the dimmer when the strobe is completely closed.

- 1) Press **OK** – the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the automatic closing of the dimmer.
- 3) Press **OK** to confirm the selection (the display blinks for some seconds), or LEFT **◀** to keep current settings.

## DISPLAY

Used for automatically reduce brightness on the display after about 30 seconds in idle.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the decreasing of display brightness.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.



## SETTING

Used to save 3 different settings of the items in the options menu and relative submenus.

- 1) Press **OK** - "Default preset" appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following configurations:
  - Default preset (\*)
  - User preset 1
  - User preset 2
  - User Preset 3
- 3) Press **OK** - "Load preset X" appears on the display.
- 4) Use the UP **▲** and DOWN **▼** keys to select:
  - Load preset X to recall a previously stored configuration.
  - Save to preset X to store the current configuration.
 a confirmation message (Are you sure?) appears on the display.
- 5) Select YES to confirm the selection or NO to keep the current setting and return to the next higher level.

### (\*) DEFAULT PRESET

Used for restoring default values on all options menu items and relevant submenus.

- 1) Press **OK** , a confirmation message (Are you sure?) appears on the display .

2) Select YES to confirm the selection or NO to keep current setting.

OPTION	DEFAULT
Lamp DMX	On
Invert Pan	Off
Invert Tilt	Off
Swap Pan-Tilt	Off
Encoder Pan-Tilt	On
Colour mixing	CMY
Fixed Wheel Shortcut	On
Shutter on error	Off
Dimmer on Shutter	Off
Display	On

## INFORMATION MENU

### SYSTEM ERRORS

### Fixture Hours

Used for displaying projector operating hours (total and partial).

Press **OK** - Hours total and partial appears on the display.

#### Total counter

Counts the number of projector working life hours (from manufacture to date).

#### Partial counter

Counts the number of partial projector working life hours since the last reset to date.

Press **OK** to reset partial projector working hours a confirmation message (Are you sure?) appears on the display.

Select YES to reset partial projectors counter or NO to keep the current setting and return to the top menu level.

### Lamp Hours

Used for displaying the lamp working hours (total and partial).

Press **OK** - Hours total and partial appears on the display.

#### Total counter

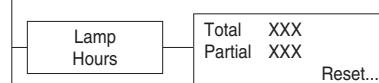
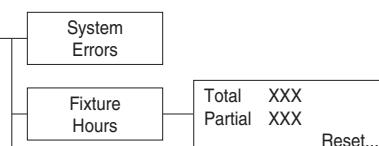
Counts the number of projector working hours with the lamp on (from manufacture to date).

#### Partial counter

Counts the number of lamp working hours since the last reset to date.

Press **OK** to reset partial lamp working hours, a confirmation message (Are you sure ?) appears on the display.

Select YES to reset partial counter or NO to keep the current setting and return to the top menu level



Lamp Strikes	Total XXX Partial XXX Reset...
-----------------	--------------------------------------

### LAMP STRIKES

Used for displaying the number of times the lamp was turned on (total and partial).

Press **OK** - the number of times the lamp was turned on (total and partial) appears on the display.

#### Total counter

Counts the number of times the lamp was turned on (from manufacture to date).

#### Partial counter

Counts the number of times the lamp was turned on since the last reset to date.

Press **OK** to reset partial lamp strikes hours, a confirmation message (Are you sure ?) appears on the display.

Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

System Version	Board CPU brd com.dev 0: PT-3f 1: 6-Ch 2: 6-Ch	Revis. x.x.x x.x x.x x.x x.x	Hw.rv. x.x x.x x.x x.x x.x
-------------------	---	---	---

### SISTEM VERSION

Used for displaying the software and hardware version of each board installed in the projector.

1) Press **OK**

2) Use the UP **▲** and DOWN **▼** keys to select the board:

CPU brd (CPU board)

0: PT-3f (Pan / Tilt board)

1: 6-Ch (6 channel board)

2: 6-Ch (6 channel board)

Board Diagnost.	Board 0:PT-3f 1:6-Ch 2:6-Ch	Status Good Good Good	Err% 0.00 0.00 0.00
--------------------	--------------------------------------	--------------------------------	------------------------------

### BOARD DIAGNOSTIC

Used for displaying the status error of each board installed in the projector:

0: PT-3f (Pan / Tilt board)

1: 6-Ch (6 channel board)

2: 6-Ch (6 channel board)

Dmx Monitor	Cyan Magenta Yellow C.T.O. Colour W. Strobe Dimmer Dimm. fine Prism C. Prism rot. Prism mov. Lin.Zoom Pan Pan fine Tilt Tilt fine Function Reset Lamp On/Off	Val XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX XXX	Perc X% X% X% X% X% X% X% X% X% X% X% X% X% X% X% X% X%
----------------	--	--	--

### DMX MONITOR

Used for displaying the projector DMX channel level in bit (Val) and in percentage (Perc)

Press **OK** and use the UP **▲** and DOWN **▼** keys to choose the channel you need.

Fans Monitor	Fan Pwr.Sup Ball.In. Ball.Out Eff.In Eff.Out Lamp	Speed (RPM) XXXX XXXX XXXX XXXX XXXX XXXX
-----------------	---	---

### FANS MONITOR

Used for displaying the speed of each fan installed in the projector:

Pwr.Sup (Power supply Fan)

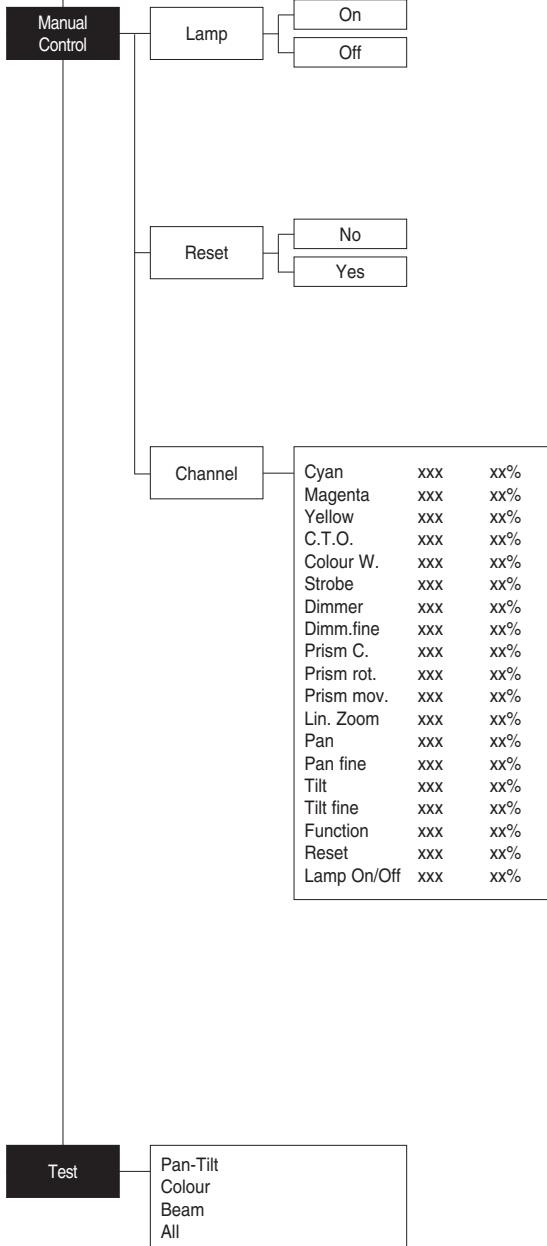
Ball. IN (Ballast IN Fan)

Ball. Out (Ballast OUT Fan)

Eff.IN (Effects IN Fan)

Eff.OUT (Effects OUT Fan)

Lamp (Lamp Fan)



## MANUAL CONTROL

### LAMP

Used for turning lamp on and off from the projector control panel.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP and DOWN keys to turn the lamp on (On) or off (Off)
- 3) Press **OK** to confirm the selection or LEFT to keep current settings and return to the top level.

### RESET

Used for resetting the projector.

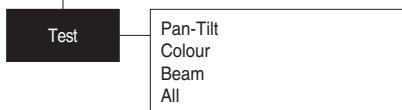
- 1) Press **OK** to reset the projectors, a confirmation message (Are you sure ?) appears on the display.
- 2) Select YES to starting reset the fixture or NO to keep the current setting and return to the top menu level.

### CHANNEL

Used for setting channel levels from the projector control panel.

- 1) Press **OK** - the first channel appears on the display.
- 2) Use the UP and DOWN keys to select the required channel:
- 3) Press **OK** and use the UP and DOWN keys to select the required DMX level (value between 0 and 255).
- 4) Press LEFT to return to the top menu level.

## TEST MENU



### AUTOTEST

Allows you to check the proper functioning of effects.

- 1) Press **OK** the current setting appears on the display (On or Off).
- 2) Use the UP and DOWN keys to select the required test.
- 3) Press **OK** to confirm the selection or LEFT to keep current settings.

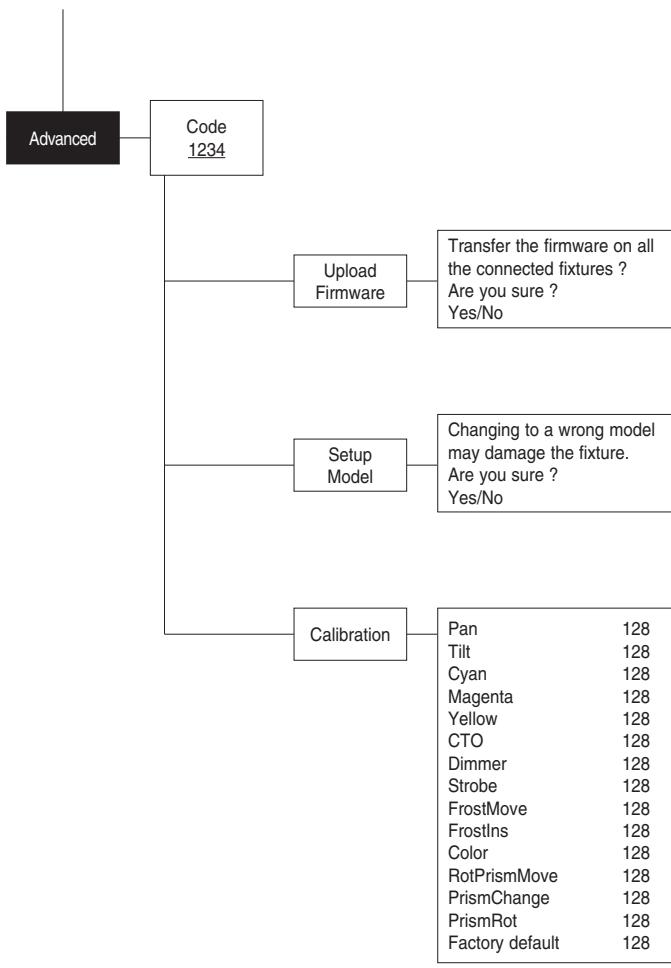
Test sequence:

Pan - Tilt effects (Pan & Tilt)

Colour effects (CMY, CTO, colour wheel)

Beam effects (Stopper-Strobe / Dimmer / Prism / Frost / Zoom)

All effects



## ADVANCED MENU

To enable the "Advanced Menu" set up the "Access code" (1234) using the UP , DOWN RIGHT keys.

Press - "Menu advanced" appears on the display

### UP LOAD FIRMWARE

Allows you to transfer the firmware from 1 fixture to all the connected fixtures.

- 1) Press , a confirmation message appears on the display.  
Select YES to start the firmware loading or no to keep the current setting and return to the top menu level

### SETUP MODEL

Allows you to change the default model of projector.

- 1) Press a confirmation message appears on the display.  
Select YES to define the model of projector or NO to keep the current setting and return to the top menu level.

### CALIBRATION

Allows you to adjust effects from the control panel to obtain perfect uniformity between the projectors.

- 1) Press - "channels" appears on the display.
- 2) Using the UP and DOWN buttons, select the effect you wish to regulate.
- 3) Press and use the RIGHT , UP and DOWN buttons to make the adjustment by setting a value between 0 and 255.
- 4) Press to confirm the selection or LEFT to keep current settings and return to the top level.

### FACTORY DEFAULT

Allows you to restore default values of all channels (128).

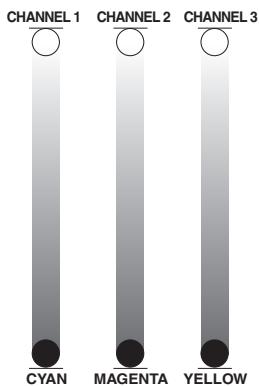
- 1) Press – a confirmation message appears on the display (Reset calibration to factory default ?).  
Select YES to reset calibration to factory default or NO to keep the current setting and return to the top menu level.

## ALPHA WASH 1500 LT

CHANNEL	Dmx MODALITY	
	STANDARD	VECTOR
1	CYAN	CYAN
2	MAGENTA	MAGENTA
3	YELLOW	YELLOW
4	C.T.O.	C.T.O.
5	COLOUR WHEEL	COLOUR WHEEL
6	STOP / STROBE	STOP / STROBE
7	DIMMER	DIMMER
8	DIMMER FINE	DIMMER FINE
9	ROTATING PRISM CHANGE	ROTATING PRISM CHANGE
10	PRISM ROTATION	PRISM ROTATION
11	EFFECTS MOVEMENT	EFFECTS MOVEMENT
12	ZOOM	ZOOM
13	PAN	PAN
14	PAN FINE	PAN FINE
15	TIILT	TIILT
16	TIILT FINE	TIILT FINE
17	FUNCTION	FUNCTION
18	RESET	RESET
19	LAMP ON / OFF	LAMP ON / OFF
20		PAN - TIILT TIME
21		COLOUR TIME
22		BEAM TIME

#### • COLOUR MIXING - channel 1 - 2 - 3

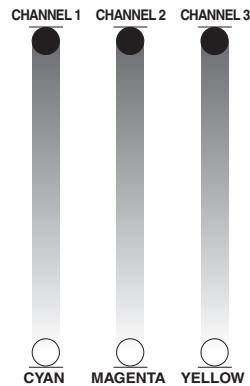
Operation with option color mixing: RGB



BIT	%	EFFECT
255	100	COLOUR EXCLUDED
0	0.0	COLOUR INSERTED

**IMPORTANT:** The lamp dim to half power 1 second after all the 3 channels stay at 0% level. The lamp goes back to full power when the channels level is put higher than 0%.

Operation with option color mixing: CMY



BIT	%	EFFECT
255	100	COLOUR INSERTED
0	0.0	COLOUR EXCLUDED

**IMPORTANT:** The lamp dim to half power 1 second after all the 3 channels stay at 0% level. The lamp goes back to full power when the channels level is put higher than 0%.

#### • C.T.O. - channel 4



BIT	%	EFFECT
255	100	FILTER INSERTED
0	0.0	FILTER EXCLUDED

#### • COLOUR WHEEL - channel 5



BIT	%	EFFECT
255	100	FAST ROTATION
128	50.0	SLOW ROTATION
0	0.0	WHITE

#### • STOP / STROBE - channel 6



BIT	%	EFFECT
252 - 255	98.7 - 100	OPEN
239 - 251	93.7 - 98.2	RANDOM FAST STROBE
226 - 238	88.7 - 93.2	RANDOM MEDIUM STROBE
213 - 225	83.7 - 88.2	RANDOM SLOW STROBE
208 - 212	81.7 - 83.2	OPEN
207	81.2	FAST PULSATION
108	42.5	SLOW PULSATION
104 - 107	41.0 - 42.0	OPEN
103	40.5	FAST STROBE (12 flash/sec)
4	1.7	SLOW STROBE (1 flash/sec)
0 - 3	0.0 - 1.2	CLOSED

**IMPORTANT:** The lamp dim to half power 1 second after the channel stay at 0% level. The lamp goes back to full power when the channel level is put higher than 0%.

#### • DIMMER - channel 7



BIT	%	EFFECT
255	100	
0	0.0	

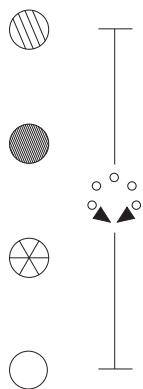
The lamp is linearly dimmed from full power to half power electronically and mechanically from half power to off.

#### • DIMMER FINE - channel 8



BIT	%	EFFECT
255	100	
0	0.0	

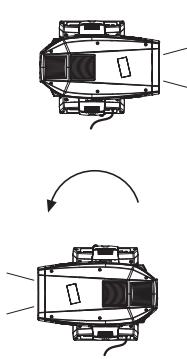
• ROTATING PRISM CHANGE - channel 9



BIT	%	EFFECT
192-255	75.0-100	OVALIZER
128-191	50.0-74.7	U.V. FILTER
64-127	25.0-49.7	PRISM
0-63	0.0-24.7	WHITE

• PAN - channel 13

Operation with option InvertPan  $\diamond$  Off  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)



BIT	%
255	100
0	0.0

• PRISM ROTATION - channel 10



BIT	%	EFFECT
255	100	FAST ROTATION (120 rpm)
191-192	75.5-75.0	SLOW ROTATION (3 rpm)
190	74.7-74.2	STOP
128	50.0	SLOW ROTATION (3 rpm)
127	49.7	POSITION 540 $\diamond$
105	41.7	POSITION 450 $\diamond$
84	33.0	POSITION 360 $\diamond$
63	24.7	POSITION 270 $\diamond$
42	16.2	POSITION 180 $\diamond$
21	8.2	POSITION 90 $\diamond$
0	0.0	POSITION 0 $\diamond$

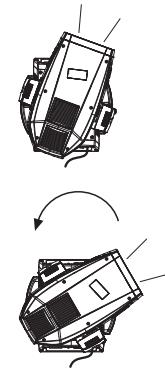
• EFFECTS MOVEMENT - channel 11

(Frost, Prism, Colour wheel)

BIT	%	EFFECT
255	100	WIDE BEAM
0	0.0	NARROW BEAM

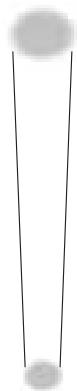
• PAN FINE - channel 14

Operation with option InvertPan  $\diamond$  Off  
(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)



BIT	%
255	100
0	0.0

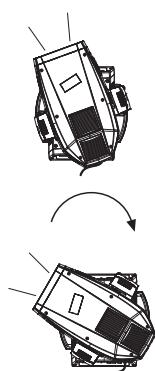
• ZOOM - channel 12



BIT	%	EFFECT
255	100	WIDE BEAM
0	0.0	NARROW BEAM

Operation with option InvertPan  $\diamond$  On

(Tilt conventionally represented at 14% and option Invert Tilt  $\diamond$  Off)

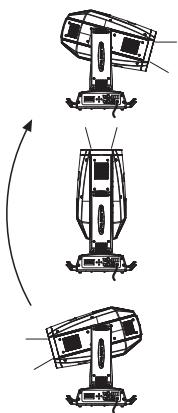


BIT	%
255	100
0	0.0

• **TILT - channel 15**

Operation with option Invert Tilt  $\diamond$  Off

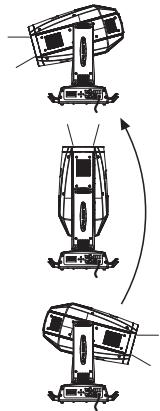
(Pan conventionally represented at 0% and option Invert Pan  $\diamond$  Off)



BIT	%
255	100
128	50.0
0	0.0

Operation with option Invert Tilt  $\diamond$  On

(Pan conventionally represented at 0% and option Invert Pan  $\diamond$  Off)

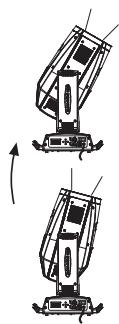


BIT	%
255	100
128	50.0
0	0.0

• **TILT FINE - channel 16**

Operation with option Invert Tilt  $\diamond$  Off

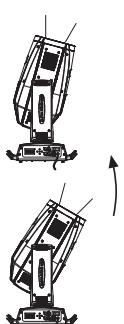
(Pan conventionally represented at 0% and option Invert Pan  $\diamond$  Off)



BIT	%
255	100
0	0.0

Operation with option Invert Tilt  $\diamond$  On

(Pan conventionally represented at 0% and option Invert Pan  $\diamond$  Off)



BIT	%
255	100
0	0.0

• **FUNCTION - channel: 17**

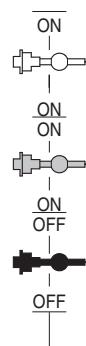
BIT	%	EFFECT
255	100	UNUSED RANGE
51	20.0	LINEAR (DEFAULT) ————— DIMMER CURVE
39	15.0	CONVENTIONAL —————
26	10.0	NORMAL SPEED ————— PAN-TILT
13	5.0	FAST SPEED (DEFAULT) ————— PAN-TILT
0	0.0	UNUSED RANGE

The functions are activated staying 5 seconds in necessary level

• **RESET - channel: 18**

BIT	%	EFFECT
255	100	COMPLETE RESET
		Complete reset is activated passing through the unused range and staying 5 seconds in complete reset levels.
128	50.0	COMPLETE RESET PAN / TILT RESET
127	49.7	Pan / Tilt reset is activated passing through the unused range and staying 5 seconds in Pan / Tilt reset levels.
77	30.0	PAN / TILT RESET EFFECTS RESET
76	29.7	Effects reset is activated passing through the unused range and staying 5 seconds in Effects reset levels.
26	10.0	EFFECTS RESET
25	9.7	UNUSED RANGE
0	0.0	UNUSED RANGE

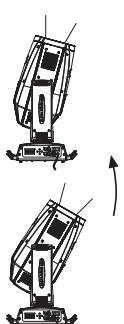
• **LAMP CONTROL (only with option LAMP DMX On) - channel: 19**



BIT	%	EFFECT
255	100	LAMP ON (FULL POWER)
		Lamp ignition after 5 s in full power levels.
		Immediate transition from half to full power.
180	70.5	LAMP ON (FULL POWER)
179	70.0	LAMP ON (HALF POWER)
		Immediate transition from full to half power.
		Lamp ignition not allowed in half power.
101	39.5	LAMP ON (HALF POWER)
100	39.0	LAMP OFF
		Lamp switch off passing through the unused range and staying 5 s in Lamp OFF levels.
26	10.0	LAMP OFF
25	9.7	UNUSED RANGE
0	0.0	UNUSED RANGE

Operation with option Invert Tilt  $\diamond$  On

(Pan conventionally represented at 0% and option Invert Pan  $\diamond$  Off)



BIT	%
255	100
0	0.0

## TIMING CHANNELS

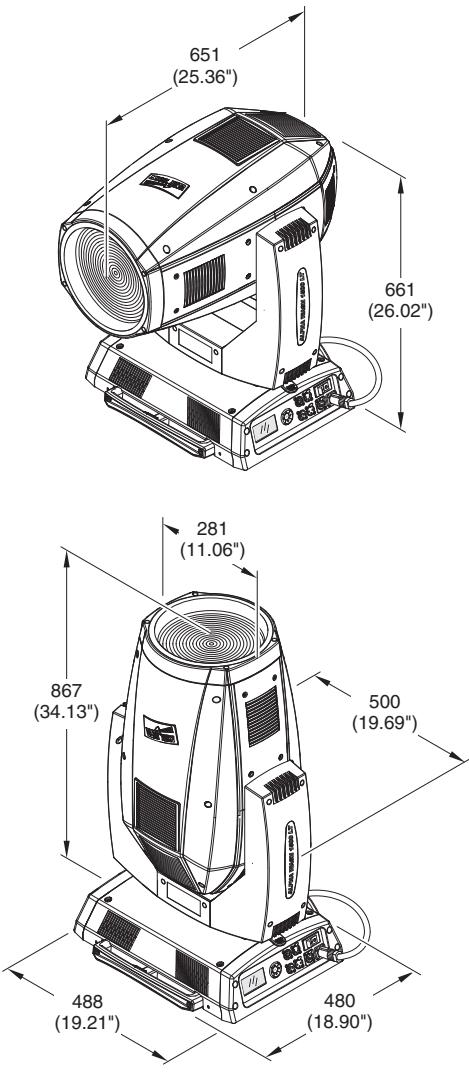
	Timing Channel	Channel function
20	Pan - Tilt time	Pan - Tilt - (Pan fine - Tilt fine)
21	Colour time	CMY - C.T.O. - Colour Wheel
22	Beam time	Dimmer - Rotating Prism Change - Zoom

## TIME TABLE

BIT	Seconds	BIT	Seconds								
0	Full	43	8.6	86	24	129		172		216	170
1	0.2	44	8.8	87		130	41	173	58	217	
2	0.4	45	9	88		131		174		218	
3	0.6	46	9.2	89	25	132	42	175		219	180
4	0.8	47	9.4	90		133		176	59	220	
5	1	48	9.6	91	26	134		177		221	
6	1.2	49	9.8	92		135	43	178	60	222	190
7	1.4	50	10	93		136		179		223	
8	1.6	51	10.2	94	27	137	44	180		224	200
9	1.8	52	10.4	95		138		181	65	225	
10	2	53	10.6	96	28	139		182		226	
11	2.2	54	11	97		140	45	183		227	210
12	2.4	55		98		141		184	70	228	
13	2.6	56	12	99	29	142		185		229	
14	2.8	57		100		143	46	186	75	230	220
15	3	58	13	101		144		187		231	
16	3.2	59		102	30	145	47	188		232	230
17	3.4	60		103		146		189	80	233	
18	3.6	61	14	104	31	147	48	190		234	
19	3.8	62		105		148		191	85	235	240
20	4	63	15	106		149		192		236	
21	4.2	64		107	32	150	49	193		237	250
22	4.4	65		108		151		194	90	238	
23	4.6	66	16	109	33	152		195		239	
24	4.8	67		110		153	50	196	95	240	260
25	5	68	17	111		154		197		241	
26	5.2	69		112	34	155	51	198	100	242	270
27	5.4	70		113		156		199		243	
28	5.6	71	18	114	35	157		200		244	
29	5.8	72		115		158	52	201	110	245	280
30	6	73	19	116		159		202		246	
31	6.2	74		117	36	160	53	203		247	290
32	6.4	75		118		161		204	120	248	
33	6.6	76	20	119	37	162		205		249	
34	6.8	77		120		163	54	206		250	300
35	7	78		121		164		207	130	251	
36	7.2	79	21	122	38	165		208		252	
37	7.4	80		123		166	55	209	140	253	
38	7.6	81	22	124		167		210		254	
39	7.8	82		125	39	168	56	211		255	310
40	8	83		126		169		212		Follow cue Data	
41	8.2	84	23	127		170	57	213			
42	8.4	85		128	40	171		214			

## TECHNICAL INFORMATION

200 - 240V



### Power supplies available

- 200-240V 50/60Hz

### Input power

- 2000VA a 230V 50Hz.

### Lamp

Discharge lamp.

- Type HTI 1500W/60/P50 Lok-it
  - Cap PGJ50
  - Colour temperature 6000 K
  - Luminous flux 135000 lm
  - Average life 750 h
  - Any working position
- Type MSR Gold 1500 FastFit
  - Cap PGJ50
  - Colour temperature 6000 K
  - Luminous flux 120000lm
  - Average life 750h
  - Any working position

### Motors

17 stepper motors, operating with microsteps, totally microprocessor controlled.

### Optical unit

- Elliptic reflector with high luminous efficiency

### Channels

Max 22 control channels.

### Inputs

- DMX 512

### Movable body

- Movement by means of two stepper motors, controlled by microprocessor.
- Automatic repositioning of PAN and TILT after accidental movement not controlled by control unit.
- Travel:
  - PAN = 540°
  - TILT = 252°
- Maximum speeds:
  - PAN = 4.0 sec (360°)
  - TILT = 3.2 sec (252°)
- Resolution:
  - PAN = 2.11°
  - PAN FINE = 0.008°
  - TILT = 0.98°
  - TILT FINE = 0.004°

### IP20 protection rating

- Protected against the entry of solid bodies larger than 12mm (0.47").
- No protection against the entry of liquids.

### CE Marking

In conformity with the European Union Low Voltage Directive 2006/95/CE and Electromagnetic compatibility Directive 2004/108/CE.

### Safety Devices

- Bipolar circuit breaker with thermal protection.
- Automatic break in power supply in case of overheating or failed operation of cooling system.

### Cooling

Forced ventilation with axial fans.

### Body

- Aluminium structure with die-cast plastic cover.
- Two side handles for transportation.
- Device locking PAN and TILT mechanisms for transportation and maintenance.

### Working position

Functioning in any position.

### Weights and dimensions

- Weight: about 46.7 Kg (102lbs 12ozs).

## CAUSE AND SOLUTION OF PROBLEMS

THE PROJECTOR WILL NOT SWITCH ON		<b>PROBLEMS</b>	
ELECTRONICS NON-OPERATIONAL			
DEFECTIVE PROJECTION			
REDUCED LUMINOSITY			
POSSIBLE CAUSES	CHECKS AND REMEDIES		
● No mains supply.	Check the power supply voltage.		
● Lamp exhausted or defective.	Replace the lamp. (See instructions).		
● Signal transmission cable faulty or disconnected.	Replace the cables.		
● Incorrect addressing.	Check addresses (see instructions).		
● Fault in the electronic circuits.	Call an authorised technician.		
● Lenses or reflector broken	Call an authorised technician.		
● ● Dust or grease deposited.	Clean (see instructions).		

